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NIH Grantees Face a Worsening Budget Squeeze

In an end-of-session reversion to past patterns of generosity toward biomedical research, the generally tightfisted 97th Congress was fairly kind to the National Institutes of Health, increasing its budget by \$361 million, rather than the \$107 million sought by the Administration, to raise the total to just over \$4 billion.

That's a record sum for NIH. But with the biomedical research enterprise having grown to record proportions in recent times, the fact is that over the past four years it has become tougher than ever for grant-seeking scientists to extract money from the NIH system. Thus, by the sensitive measure of award rates for competing projects, some 45 percent of applications deemed meritorious were getting funded in fiscal 1978; by 1981, the percentage of winners had declined to 39 percent. And for 1982, according to preliminary data obtained by SGR, the figure has dropped to about 33 percent.

Science Foundation Director Reviews Dismissal Row—Page 3

The so-called stabilization pact that Director Donald S. Fredrickson negotiated with the Carter Administration called for funds to sustain 5000 new and competing grants per year. But the durability of that agreement has proven to be questionable in the newly commenced reign of his successor, James B. Wyngaarden.

The Reagan Administration's budget for the current fiscal year would have cut the budget back to a level that would have provided for only 4100 new and competing projects. Congress came to the rescue and provided funds for 4900.

The dilemma facing NIH is that in the absence of a great infusion of new money—not likely in the current political and economic setting—some elements in its constituency are going to have to log less time in the trough or get out altogether.

One of the prime candidates would seem to be indirect costs—the money off the top that institutions receive for expenses associated with the presence of research activities on their premises. Wyngaarden, not long after taking office, correctly observed that indirect costs were taking an ever-growing slice of NIH funds, having risen from 23 percent of direct costs in 1972 to over 30 percent last year. (In the first year of the Reagan Administration, the growth of indirect costs ate up about one half of NIH's modest budget increase of \$108 million.)

When the budget for the current fiscal year was introduced, it called for a 10-percent reduction in indirect-cost levels, with the savings to be redeployed for investigator-initiated projects. But, given the dependence of NIH's medical-school clients on that money, the outcry was prodigious, and the House Appropriations Committee specifically earmarked additional funds to keep the payments at the old level. The Committee asked the Department of Health and Human Services to examine the payment system, and also said that it wants the General Accounting Office to look into it.

While that indirect-cost money might seem indispensable and untouchable, especially for the 50 or so medical schools that heavily depend on it, the fact is that NIH has made abrupt policy shifts in the past.

And, committed to a top priority for investigator-

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In Brief

Is the Check in the Mail? Of four publications that sent reporters to visit South Pole research sites in November, only the *Miami Herald* has reimbursed the host National Science Foundation for \$1300 in trans-Pacific commercial fare. NSF, eager to publicize its polar programs, doesn't ask to be reimbursed for the California-New Zealand leg of the trip. But some publications stick to the principle that it's a bit gamy to take expense money from organizations they're writing about. Not yet heard from by NSF's bookkeepers are *US News & World Report*, *Parade Publications*, and *Science 82*, a journal of the American Association for the Advancement of Science.

The White House has settled on a list of winners of the National Medal of Science, the top presidential award in science, medicine, and engineering, and thoughts are now turning to when and where to bestow them. One possibility under discussion calls for Mr. Reagan to hand out the prizes—as many as 20 may be awarded in one year—at the annual spring meeting of the National Academy of Sciences.

Rep. George Brown (D-Calif.) is planning hearings on federal agricultural research policy early in the new Congress in preparation for the 1985 expiration of the Omnibus Farm Bill. Brown says the federal ag policies and organization are obsolete for dealing with longterm needs.

...Funding Policy to Stress Basic Research

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initiated research projects—which now receive some 50 percent of all extra-mural funds, as compared with 35 percent a decade ago—it would not be surprising to see more shifts aimed at protecting the research core.

In 1972, contracts, mainly with commercial research organizations, took up over 21 percent of the research budget; last year, they were down to less than 14 percent. In that same period, funds for research centers dropped from 16 percent of the research total to 12 percent.

Are further shifts possible to maintain the flow of money into individual research grants? The victims of past cuts insist that they've contributed more than enough, but, since the fundamental ideology of NIH is focused on investigator-initiated basic research, it appears likely that contracts and overhead are in for a squeeze.

As Wyngaarden emphatically stated in a speech last October to a health-policy forum in Washington, "...one of my major goals will be to preserve the traditional emphasis of NIH on basic research as the bedrock upon which all of the rest of the program structure is built."—DSG

Close, But No Cigar

More and more NIH grant applicants are discovering that you can win but lose at the same time. The key is the Alice in Wonderland concept of "approved but unfunded."

According to an analysis prepared by NIH, "The proportion of unfunded competing research project applications eligible for award reached 56 percent in FY 1981, higher than any other year since 1972." In 1974, it was 29 percent and in 1975, it was 33 percent.

In NIH's topsy-turvy scoring system—where 100 is high and 500 is low—the figures for 1981 show that 6.3 percent of applicants in the 100-200 range went unfunded; 22.8 percent in the 201-250 range, and 24.2 percent in the 251-300 range.

All in all, these approved but unfunded applications added up to \$696 million.

NIH Competing Award Rates—Funded as Percent of Approved

| Institute | 1977 | 1978 | 1979 | 1980 | 1981 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|
| Total | 38.6% | 45.3% | 51.6% | 42.3% | 39.2% |
| Cancer | 37.8 | 43.4 | 43.9 | 39.0 | 35.8 |
| Heart, Etc. | 45.5 | 46.7 | 55.4 | 33.8 | 40.7 |
| Dental | 43.7 | 39.5 | 45.5 | 37.7 | 45.1 |
| Arthritis, Etc. | 44.4 | 42.1 | 50.0 | 42.8 | 41.0 |
| Neurology, Etc. | 26.6 | 53.0 | 62.6 | 52.9 | 40.6 |
| Allergy, Etc. | 27.6 | 36.4 | 48.6 | 38.3 | 34.9 |
| Gen. Med. Sci. | 32.9 | 46.7 | 58.2 | 58.3 | 40.1 |
| Child Health, Etc. | 33.2 | 45.7 | 44.8 | 36.3 | 39.2 |
| Eye | 55.3 | 64.6 | 65.2 | 52.2 | 52.4 |
| Environment | 55.2 | 45.2 | 41.0 | 35.1 | 47.5 |
| Aging | 59.5 | 34.1 | 48.5 | 32.0 | 23.4 |

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"Perhaps a Little Naive," Says New NSF Chief

Edward A. Knapp's pratfall debut as Director of the National Science Foundation (SGR Vol. XII, No. 21) continues to stir commentary. Among the latest is a letter in *Science* of January 14 from IBM Vice President Lewis M. Branscomb, Chairman of the National Science Board—NSF's policymaking body—to the effect that management of NSF is a statutory responsibility of the Director. The Board, says Branscomb, had no role in Knapp's dismissal of two senior NSF officials, Deputy Director Donald N. Langenberg and Associate Director Eloise E. Clark, plus a third who was leaving anyway. The dismissals were the precipitating event for several wild-eyed allegations that Reaganite kooks are taking over the Foundation, and that NSF's integrity is at stake.

From two long conversations with Knapp and inquiries among persons who know him, SGR's impression is that he's a good man who foolishly got off to a bad start, that he's no ideological kin of the hatchetmen that the Reaganites have installed in many federal agencies, and that he's as true as any of his predecessors to NSF's traditional preference for aloofness from partisan politics.

Following are edited excerpts from a conversation that we had with him January 4 for the purpose of obtaining his account of his troubled entrance on the Washington scene:

SGR. Many people in the scientific community would welcome a clear account of what led to the dismissals.

Knapp. The situation is that I came into the Foundation perhaps a little naive, but with a clear understanding that I wanted to play a very strong leadership role in the Foundation and in American science. I felt I needed my own team of people to make the place respond to what I thought my priorities were. I made the decision to ask the presidential appointees to leave. I think it's been misinterpreted as being a politicization of the agency which, in fact, it is not. [To fill the vacancies] we're going to use the full mechanism of a [National Science] Board search committee to find the very best scientists we can. I've asked Gerry Tape [an elder statesman of research, administration and advice who retired in 1980 after 11 years as President of Associated Universities, Inc., a research consortium that runs the Brookhaven National Laboratory and the National Radio Astronomy Observatory] to talk to people and find out who might be available. He has wide experience and contacts in the field. I think there should be no worry in the scientific community whatsoever that there is an intent in any of this to make partisan politics out of

Sharp Reactions to Dismissals

Among the reactions to the NSF dismissals was a *Washington Post* article of December 11, headlined "Science Agency Director Removes 3 After White House Pressure," and describing Knapp's action as "unprecedented" and taken "after the White House pressured him to put its appointees in their jobs."

One week later, Senator Christopher J. Dodd (D-Conn.) referred to that article in an insertion in the *Congressional Record*. Dodd stated, "I am concerned about the politicization of American science. Mr. President, there is reason to question the NSF's ability to function as an independent agency...immune from the political process [in its appointments]."

As with many other sudden squalls in Washington, the Knapp-sack issue is expected to blow over quickly, though he might be grilled about the episode at his Senate confirmation hearing, date not yet set, before the Labor and Human Resources Committee.

What is quite likely, however, is that following this painful baptism as Director, he will be extremely sensitive to issues that might renew the embarrassment.

the work that the Foundation does, the funding that we do, the way that we go about getting our money, or anything. We just want to make science sound and solid in this country. It was in following that lead that I asked these changes.

SGR. It's said in science-policy circles that you've confided to several people that the White House ordered you to make the firings, that it was not your intention to make the dismissals. Is that correct?

Knapp. I made the decision to ask for the resignations. I had discussions with people in the White House about this, and we did discuss the problem. But the basic decision to ask for the resignations was mine, it was not the White House's.

SGR. Did they direct you to clean out these posts?

Knapp. No, they did not direct me.

SGR. Was there a suggestion that you might do it?

Knapp. I don't know if there was a suggestion or not. I discussed the problem, and I had made my decision; the decision was not based on pressure from them to do this.

SGR. There are people quoting you as saying that you were told to do this, and that you did not want to do it. Are they incorrect?

Knapp. There were some compromises with people in
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...Feels Reactions Are "Out of Proportion"

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the political arena having to do with timing. But nothing having to do at all with the basic decision.

SGR. What do you mean by "compromises"?

Knapp. I think you could understand that the political (pause). Some of the offices (pause). There were discussions about both the decision to ask for people to leave, for which there was no pressure. And there were also discussions about how quickly the personnel changes should be made.

SGR. Discussions with whom?

Knapp. People in the White House.

SGR. Which people?

Knapp. Primarily people in OSTP [Office of Science and Technology Policy]. But also people in the personnel office.

SGR. If these discussions had not taken place, would the personnel changes have been made anyway?

Knapp. Yes.

SGR. You told the New York Times on November 12 that "I'm not going to have any head-hunting campaigns at the Foundation. I'm not going to ask for any resignations." What was meant by that?

Knapp. I didn't plan on making major personnel changes at the Foundation, and I haven't.

SGR. It's been said that the Foundation expects to

receive a major budget increase and that you feel a more effective presentation can be made in Congress if you have your own appointees. Is that correct?

Knapp. No, I don't think so. In any case, the presidential appointees in the Foundation, I feel, should be people who are working with the Director to carry out his policies, whether there's a budget increase or if it's hard times and a budget decrease. I believe the assistant directors should be people who are active scientists, who come in for relatively short terms—they have been always in the past—who are quite familiar with the field of science that they're going to be representing, and who have had a recent working experience in the field, who are not career people, but who represent the scientific community within the Science Foundation.

SGR. Would that be one justification for these two changes?

Knapp. I think so. Yes.

SGR. I understand you were dismayed by the press coverage of the dismissals.

Knapp. I felt that the reaction to a presidential appointee in a government agency being asked to resign was out of proportion to the act itself. As I said, I was somewhat naive when I came to town. My experience had been with the Department of Energy [which supports the Los Alamos National Laboratory, where Knapp spent 26 years]. The assistant secretaries always leave when a new Secretary of Energy comes in. That just happened again at the Department when a new Secretary came in. I had incorrectly assumed that the Foundation operated on the same basis, and, in fact, whether or not it does, I think it's the proper thing to do, for an agency head to have the choice of people who are his close team trying to put policies into practice. I was dismayed because I didn't expect the reaction that I got.

SGR. It's not an unblemished tradition, but by and large it's the case that people at NSF have stayed on from one administration to another.

Knapp. That's my understanding, that it isn't a completely tight tradition, in fact that it's been such that a number of people over the history of the Foundation have been asked to resign when a new Director has been appointed.

SGR. Do you expect to submit your resignation if the Democrats come in in '85?

Knapp. A rapport with the White House and the President's Science Adviser are essential for the Director of the Foundation to be effective. I would find out who the Science Adviser for the next President would be, I would discuss with him the policies that he

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Deputy Takes Chicago Post

NSF Deputy Director Donald N. Langenberg, who was known to be looking hard for new work long before his dismissal notice came in November, has been appointed Chancellor of the University of Illinois at Chicago, effective February 1. The institution he will head results from the consolidation of the University of Illinois Medical Center and Chicago Circle campus.

Assistant Director Eloise E. Clark, who has been in charge of the NSF Directorate for Biological, Behavioral, and Social Sciences since 1976, told SGR that she's looking into various academic posts and is "under no pressure to leave" by a particular date, though she, too, has been dismissed.

Inexperienced on the Washington scene, and with several of the Foundation's senior key positions vacant, Knapp told SGR that he'll probably make some acting appointments from within NSF. Vacancy-filling is likely to be a lengthy process, given that he's looking at academics in the middle of a school year, and after a deal has been closed, it usually takes at least six months to get a presidential appointment through security checks and the White House approval process.

PhD Job Market Held Up Well Through 1981

A 1973-81 retrospective on the job market for PhD's in science and engineering found that they were faring well in the recession, but that growth of work opportunities had generally slowed and more of the degree holders were working in non-technical fields.

That's the overall picture from the PhD manpower survey that the National Academy of Sciences conducts biennially for the federal government. (The findings are carried in a National Science Foundation *Highlights* report, NSF 82-328, available without charge from NSF, Division of Science Resources Studies, 1800 G St. Nw, Washington, DC 20550.)

Concluding that "practically all"—99 percent—of PhD scientists and engineers desiring employment had jobs in 1981, the report notes that the share of them working outside of science and engineering fields had risen from 6 percent in 1973 to 9 percent in 1981. It goes on to observe that "Only a small fraction of those so employed cited the unavailability of an S/E (science/engineering) job as their reason for non-S/E employment. The most often-cited reason was 'more attractive career options,' which may or may not connote

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KNAPP

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favored, and I would try to decide whether I could be effective as Director. If I could be effective, I would hope that I could continue my service; if I could not be effective, I would not expect to stay.

SGR. But you would not automatically submit a *pro forma* resignation.

Knapp. The appointment of a Director is for a six-year term; it's not like the other agency heads. The effectiveness of the Director, however, is partially political, and I think it's more important for American science to have a Director who is effective in getting support for science and who is compatible with whatever administration is in place than just to have continuity.

SGR. Do you mean political in terms of one party versus another?

Knapp. No, I mean in terms of the rapport I was speaking of. A partisan view of the support of science is really not productive to American science. We need to develop a science policy which is best for the country. I happen to believe that the support of basic science, the support of science in universities, is exactly the way this country should be moving at the present time. And I'm completely in rapport with the policy that's being enunciated by the White House science office. I'm comfortable with it. If it were a different policy, one I wasn't comfortable with, I wouldn't want to force myself into a situation that I don't think is correct.

...But Slump Has Since Set In

Less cheery indications about the current job market for PhD scientists and engineers are contained in a followup survey (*Highlights* report NSF 82-330) which extended to last August. Major findings:

- Half of 197 responding firms reported that the availability of scientists and engineers had improved over the preceding 10 months.

- State Employment Services vacancies for scientists and engineers dropped 26 percent between July 1981 and July 1982.

- Some personnel shortages persisted in the office-machine industry—primarily for computer-related specialists—but "the number of firms indicating a lack of PhD computer-scientists applicants dropped 31 percent to 8 percent" during that year.

- All industries reported that it was easier in 1982 than in 1981 to hire recent graduates.

PhD Sci/Eng Jobs: 1973-1981

| Characteristics | Average Annual rate of growth ¹ (percent) | | | | |
|--|--|------------------|------------------|---------|---------|
| | 1973 | 1979 | 1981 | 1973-79 | 1979-81 |
| Total population..... | 239,000 | 332,000 | 364,000 | 5.7 | 4.6 |
| Male | 218,000 | 294,000 | 318,000 | 5.1 | 4.0 |
| Female | 21,000 | 38,000 | 46,000 | 10.5 | 9.9 |
| White | 217,000 | 293,000 | 323,000 | 5.2 | 4.9 |
| Black | 2,000 | 4,000 | 5,000 | 8.7 | 11.5 |
| American Indian..... | (²) | 1,000 | 2,000 | 14.2 | 55.3 |
| Asian | 10,000 | 22,000 | 28,000 | 14.5 | 13.3 |
| No report | 10,000 | 12,000 | 6,000 | — | — |
| Total science/engineering employment | 206,000 | 287,000 | 314,000 | 5.7 | 4.6 |
| Physical sciences | 44,000 | 54,000 | 57,000 | 3.5 | 2.5 |
| Mathematical sciences .. | 12,000 | 14,000 | 14,000 | 3.1 | 0.1 |
| Computer sciences | 3,000 | 7,000 | 9,000 | 16.2 | 16.4 |
| Environmental sciences | 10,000 | 14,000 | 15,000 | 5.8 | 4.3 |
| Engineering | 34,000 | 47,000 | 53,000 | 5.5 | 6.2 |
| Life sciences | 56,000 | 76,000 | 82,000 | 5.3 | 4.1 |
| Psychology | 23,000 | 35,000 | 39,000 | 7.0 | 6.1 |
| Social sciences | 24,000 | 40,000 | 44,000 | 8.5 | 4.7 |
| Business/industry | 49,000 | 75,000 | 89,000 | 7.2 | 8.7 |
| Educational institutions | 122,000 | 160,000 | 173,000 | 4.7 | 3.7 |
| Nonprofit organizations | 7,000 | 11,000 | 11,000 | 7.1 | -0.3 |
| Federal Government ³ | 19,000 | 25,000 | 26,000 | 4.2 | 2.7 |
| Other ⁴ | 9,000 | 16,000 | 16,000 | 10.3 | 1.3 |
| No report | (²) | (²) | (²) | — | — |

¹Derived from unrounded data.

SOURCE: National Science Foundation

²Less than 500. ³Includes the military and commissioned corps.

⁴Includes "other government" and "all other sectors."

...Physical Sciences, Math in Job Slump

(Continued from page 5)

truly 'voluntary' choices," the report cautions. The surveyors added that the percent of employment in distant fields showed "marked increases—4 to 5 percentage points—in the mathematical and social sciences."

While overall employment of PhD scientists and engineers increased at an annual rate of 5 percent from 1975 through 1981, jobs for computer scientists grew at an annual rate of 16 percent in the last two years of that period. Psychology and engineering grew at a 6-percent pace, while the physical sciences fell to 3 percent and mathematics experienced no job growth. Other findings:

- Job opportunities continued to shift from academe and government to business and industry, though 55 percent of all PhD science and engineering employment was still located in educational institutions in 1981. Annual growth there, however, was down to 4 percent in 1979-81, while the figure for the industry was 9 percent.

- Employment of PhD-level social scientists in universities grew at an annual rate of 7 percent from 1973-79 and at 5 percent from 1979-81. "The growth among social scientists," the report states, "seems to result from an upgrading of educational qualifications for social science employment in educational institutions. Employment of social scientists at less than the doctoral level in academia remained fairly level during the late seventies. Thus, it appears that educational institutions are replacing those social scientists without the PhD with those who hold doctorates."

- The number of women PhDs in science and engineering increased at an annual rate of 10 percent in 1979-81, and rose from 9 percent of overall employment in these fields in 1973 to 13 percent in 1981. The report notes, however, that "The median salary of PhD women scientists and engineers was 76 percent that of men in 1981"—a difference it attributes to four-fifths of the women being concentrated in the relatively low-paying life and social sciences and psychology.

APS Opens Washington Office

Following the trail of several other scientific and scholarly organizations that have established outposts in Washington to keep watch on their favorite federal agencies, the New York-based American Physical Society has set up its own Office of Public Affairs in the capital. The office, which exists, APS says, "on an experimental basis," is headed by Robert L. Park, Professor of Physics, on leave from the University of Maryland. Address: APS Office of Public Affairs, Suite 737, 2100 Pennsylvania Ave. Nw., Washington, DC; tel. (202) 429-1946.

In Print

Government and Innovation: Experimenting with Change, final report of the Experimental Technologies Incentives Program (ETIP), a pre-Reagan Commerce Department undertaking aimed at encouraging innovation. The underlying interventionist concept is so anathema to the current Administration that the 146-page report is not likely to be read in high places. But with government boosting of high-tech industry an increasingly popular theme in Democratic Party thinking, the ETIP's complex and varied experience with some 200 studies over nearly a decade merits careful examination. Copies are \$16 each (\$4.50 for microfiche), from: National Technical Information Service, Springfield, Va. 22161; specify PB 83-134486. For additional information about ETIP, contact Richard Penn at (301) 921-3324.

Informational Technology and Its Impact on American Education, the Office of Technology Assessment's 280-page addition to the anxious theme that something is going on out there but no one is quite sure what it is or might be. The report suggests, however, that federal actions and policies are perhaps the most influential factors in the development and deployment of new educational technologies. Copies are \$8 each, from: Superintendent of Documents, USGPO, Washington, DC 20402; specify stock number 052-003-00888-2.

Cancer Facts and Figures 1983, latest edition of the American Cancer Society's annual compilation of cancer incidence, survival, mortality, and major trends 1951-78; 32 pages, available without charge from ACS chapters or from national headquarters: ACS, 4 W. 35th St., New York, NY 10001.

1990 R&D Funding Projections, product of "a modest projections program" undertaken by the National Science Foundation, concludes that "real" growth for R&D will annually average about 2 percent to 1990, and that the percentage of gross national product devoted to R&D will remain at the current 2.3 percent. NSF's futurists foresee a drop in academic R&D growth rates and an increase in industrial R&D spending. Single copies of the report, 32 pages, are available without charge from NSF, Division of Science Resources Studies, 1800 G St. Nw., Washington, DC 20550; specify NSF Special Report 82-315.

Q and A with Grant Swinger: '83 Looks Good

While many scientists today complain of inadequate financial support, times have never been better for the legendary Grant Swinger, director of the Center for the Absorption of Federal Funds. Dr. Swinger, who holds the prestigious Ripov Prize, is the author of many works, including the recently published "Skiers Guide to Scientific Conferences." In the following conversation, he provides SGR a yearend review of science and a forecast for the New Year:

Q. What was the major scientific achievement of 1982?

A. Genetic engineering rates first place. Growing mice the size of rats, and, of course, our Mega-Chicken Project.

Q. Mega-Chicken?

A. Yes, with support from the fast-food industry, our Center has been developing a 200-pound chicken. All light meat, I might add.

Q. How has it been going?

A. Scientifically, quite well. But there are problems.

Q. Such as?

A. Mega-Chicken is a scientific triumph and makes economic sense. However, it turns out to have disgusting habits that I won't go into here, but beyond that, Mega-Chicken is an extremely aggressive and evil-tempered beast. We nearly lost one of our animal technicians.

Q. How have you dealt with the problem?

Robot Chicken Tenders

A. We took it as an opportunity and successfully applied to the Defense Department for a grant to develop robot chicken tenders.

Q. Defense was interested in that?

A. Not at first, but we were able to lay our hands on some reports about Russian progress in robot chicken tenders. Defense then came around. Anyway, we made tremendous advances, and developed and fielded a squad of robots that we felt were a match for Mega-Chicken.

Q. How did it work out?

A. I never saw anything like it. Absolute carnage in the coop. They went at each other like the battle of Stalingrad. The place was knee-deep in feathers, chicken parts, computer chips, circuits, gears and wheels. It seemed like a terrible setback.

Q. Only seemed?

A. Well, you can't keep something like that quiet. The Pentagon's research team was there first thing the next morning. And they were so impressed, they

couldn't move fast enough to write us a new contract.

Q. For what?

DoD Seeks Meaner Beasts

A. For further development of Mega-Chicken. They told us to forget about the robots and work on the chickens to make them bigger and meaner. Later they gave us a subcontract to develop a helmet and body armor for the beasts. But that's science: you never know where a breakthrough will lead.

Q. So much for 1982. What do you see in the new year?

A. We're very optimistic about poverty.

Q. Eliminating it?

A. Oh, no. I mean it's going to make a comeback as a growth field for research. You know, these things come and go. The list of discarded issues is endless—ocean resources, Sino-Soviet relations, Appalachia, civil defense, automation, urban renewal, energy. You've got to get in fast and get out fast, or you can be left stranded with a big research team, reports in the works, and no one out there the least bit interested. Our experience with energy is a classic example.

Q. In what way?

Profits In Poverty

A. We were off the mark with a project on the solar-powered typewriter, switched to coal liquefaction, toyed for a while with a scheme for oil solidification, then we got into woodburning, electric cars, manure as fuel, and windmills. I can't remember them all. But then, just before the whole thing collapsed, we jumped off and now we're gearing up for poverty research.

Q. What do you expect to discover?

A. Very little. Probably nothing more than we discovered last time. But that's no impediment to another go-round, especially since in looking over our old accounts we confirmed that poverty research is extremely profitable, and we can recycle a lot of the old material.

Q. Like what?

A. All that Great Society stuff from the '60s: unheated homes are bad for old people, malnutrition is harmful to kids, and unemployment is hard on family life. Poverty can be a goldmine, if you work it right. Get the picture?

Q. How can I miss it? Thank you, Dr. Swinger.—DSG

"Grant Swinger Papers" on Sale

Previous encounters with Dr. Swinger have been immortalized in Daniel S. Greenberg's "The Grant Swinger Papers," 32 pages, available for \$4.95 per copy, postpaid, from: SGR, PO Box 6226A, Washington, DC 20015. Please include payment with order.

Two More Institute Directors Named at NIH

Two more institute directors have been appointed at the National Institutes of Health, thus filling the last of the major vacancies that James B. Wyngaarden inherited when he became NIH Director last year. In most instances, the appointments have been made from within NIH, a choice in large part dictated by the huge differentials between federal pay scales and the going rates for senior executives in medical schools and industry. The new directors are:

Murray Goldstein, who takes over as Director of the National Institute of Neurological and Communicative Disorders and Stroke. Goldstein, a rare Doctor of Osteopathy in the NIH complex, has been with NIH since 1953, and became Acting Director of the Institute last February.

Harald Loe, former Dean of the University of Connecticut School of Dentistry, who has been appointed Director of the National Institute of Dental Research.

Still to be filled is the directorship of the Clinical Center, which became vacant when Mortimer B. Lipsett became Director of the National Institute of Child Health and Human Development; also the directorship of the Fogarty International Center, whose former head, Claude J.M. Lenfant, now heads the National Heart, Lung, and Blood Institute.

The newly enacted federal pay increase does little to narrow the difference between the NIH scale and salaries for comparable posts outside of government.

For NIH institute directors, basic pay will rise from \$58,500 to \$63,500. Atop that, there's a supplement for officers of the Public Health Service and for physicians. The amounts vary with circumstances and PHS rank, but the maximum is about \$10,000. NIH staff members may not partake of the lucrative consulting opportunities available to their non-government counterparts.

On the "outside," as the expression goes, a salary of \$100,000 a year is not unusual for department heads in major medical schools, and income can be a good deal more than that for clinicians. In addition, many universities provide a variety of non-salary sweeteners, including one that's increasingly valuable—remission of tuition for children of staff members.

DoD Instrument Fund Intact

The Defense Department's plans for a bigger role as a supporter of university-based science were trimmed a bit in the final days of the 97th Congress. But left untouched was an item that has been keenly awaited on many campuses—DoD's newly inaugurated \$30-million-a-year program to buy scientific instruments for academic laboratories.

The money for that purpose was part of an \$828-million science fund request that Congress eventually cut back to \$781 million. Even with the cut, growth was a respectable \$86 million.

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